

**Federal Highway Administration  
Finding of No Significant Impact (FONSI)  
for  
US-191 Colorado River Bridge  
For Bridge / Roadway Reconstruction and Widening on US-191,  
from 400 North in Moab City to SR-279 (Potash Road)  
in Grand County, Utah  
Project No.: BHF-0191(27)129E**

**PROJECT DESCRIPTION:**

The Utah Department of Transportation (UDOT), in cooperation with the Federal Highway Administration (FHWA), is proposing transportation improvements to a 3.7-mile portion of US-191, from 400 North in Moab to SR-279 (Potash Road) within Grand County. The proposed improvements are necessary to:

- Provide a bridge that accommodates US-191 traffic over the Colorado River and also meets current structural design standards,
- Improve safety throughout the project corridor,
- Meet the existing and projected travel demand through the design year 2030 and provide continuity with the existing four-lane sections at either end of the project limits, and
- Facilitate the movement of bicycle and pedestrian traffic along US-191.

The proposed action includes replacing the US-191 bridge over the Colorado River with a new bridge that consists of four travel lanes, a median, and shoulders. The roadway would also be widened to four lanes to meet the existing and projected travel demand through the design year 2030 and provide continuity between the four-lane sections north and south of the project limits. The proposed action would improve safety throughout the project corridor by upgrading shoulders and meeting design standards. Bicycle and pedestrian movements along US-191 would be facilitated by the addition of shoulders, sidewalks, and/or separated paths. Construction would be conducted in phases, based on availability of funding. The design speed between 400 North and the bridge would be 40 mph. North of the bridge, the design speed would be 60 mph. The Preferred Alternative is presented in Section 2.3.2 and Figures 2-3 through 2-6 of the Environmental Assessment (EA). The following is a summary of the Preferred Alternative, along with likely phasing and some of the constraints that influenced the design and alignment of the bridge and roadway.

**US-191 Colorado River Bridge Replacement – Phase 1:** Phase 1 is funded to replace the Colorado River Bridge and roadway approaches. Between the bridge and the Courthouse Wash Kiosk, a separated facility for bicycle and pedestrian traffic is also included in Phase 1. The US-191 Colorado River Bridge would include four 12-foot travel lanes, a six-foot open median, eight-foot shoulders, plus a two-foot offset to the barrier. The bridge type is expected to consist of a new steel or concrete girder bridge with four to seven spans. The bridge would be constructed in two stages. The initial

stage would be built west of the existing bridge and would include two through lanes of traffic, shoulders, and barriers. Once this work is completed, traffic would be moved to the completed section of the new structure and the second stage would remove the existing bridge and complete the widening. Several constraints in this segment have influenced the design and alignment of the bridge and roadway. South of the US-191 Colorado River Bridge, the alignment and elevation need to tie back into the existing roadway to minimize impacts associated with the SR-128 intersection. The trail crossing under the bridge on the south side of the Colorado River would be restored. Since the new bridge girders could be about three feet deeper than the existing girders, the bridge and roadway pavement surface elevation was raised approximately three feet to maintain the existing vertical clearance between the Colorado River and the structure. (The actual minimum vertical clearance requirements will be determined during final design of the structure). North of the bridge, the alignment and elevation needs to tie into the centerline of the existing Courthouse Wash Structure. The proposed bridge alignment includes a minor skew from the existing bridge alignment in order to achieve an acceptable roadway geometry that meets AASHTO design standards and to avoid encroaching into the rock slope associated with Arches National Park.

**Roadway Widening between 400 North to Colorado River Bridge – Future Phase:**

This segment would remain in its current condition until additional funding becomes available. This roadway section would include four 12-foot lanes, 12-foot median and eight-foot shoulders to tie into the roadway section for the Moab Main Street Project at 400 North. The proposed alignment would typically follow the centerline of the existing road and tie into the improvements associated with the Moab Main Street Project near 400 North. Since the design in this section includes curb and gutter, the elevation of the road varies from the existing condition where the minimum slope requirements could not be achieved otherwise. To minimize property impacts associated with the wider road, the proposed elevation has also been modified from the existing condition between 500 West and 400 North and at some major driveways. Two commercial buildings east of US-191 (512 North Main and 550 North Main) remain impacted by the proposed alignment and are subject to further review during the design process, in coordination with each property owner.

**Courthouse Wash Structure Widening – Future Phase:** The existing Courthouse Wash Structure would remain in its current condition until additional funding becomes available. The Preferred Alternative would widen the existing structure to provide four 12-foot lanes, a six-foot open median, and five-foot shoulders to match the roadway section near Potash Road, as well as a 10-foot attached path for non-motorized bicycle and pedestrian traffic. Most widening would occur to the south to avoid impacting Arches National Park; however, some widening to the north would be needed to accommodate the two-way attached path.

**Roadway Widening between the US-191 Colorado River Bridge and Potash Road – Future Phase:** Most of this segment would remain in its current condition until additional funding becomes available. This section would provide four 12-foot lanes, a six-foot open median, and five-foot shoulders. The location and elevation of the roadway would tie into the constraints associated with the Courthouse Wash Structure and the

recently completed section of roadway just south of Potash Road, as well as recent improvements made by the U.S. Department of Energy (USDOE).

## **ALTERNATIVES:**

A range of reasonable alternatives were considered. Each conceptual alternative considered is summarized in Section 2.2 of the EA and further detail is included in the Bridge Feasibility Study. The following is a list of alternatives considered:

### **No Build Alternative (two lanes remain from Potash Road to Moab):**

- Alternative 1 – No Build Alternative (on-going maintenance)

### **Conceptual Build Alternatives (each includes four lanes from Potash Road to Moab):**

- Alternative 2 – Widen Existing Bridge
- Alternative 3 – Construct a New Southbound Bridge
- Alternative 4 – Construct a New Bridge with Pedestrian/Bicycle Facility on Existing Bridge
- Alternative 5 – Construct a New Bridge (Staged)
- Alternative 6 – Construct a New Bridge on an Alternate Alignment
- Alternative 7 – Construct a New Bridge (Non-staged)

Alternatives 5 and 7 would achieve the project objectives and goals; therefore, these alternatives also considered cost and potential impacts. Alternative 5 was found to provide the same benefits as Alternative 7 and result in less impact to surrounding properties and the environment. As such, the general concept of Alternative 5 was advanced and further refined during the development of the Build Alternative (Preferred Alternative).

## **PROJECT IMPACTS AND MITIGATION:**

The following table summarizes possible impacts that may occur from the implementation of the Preferred Alternative and proposed mitigation to offset these impacts. Constraints were identified early in the project scoping and measures that were able to avoid and minimize important resources have been incorporated throughout the development of the Preferred Alternative.

### **Project Impacts and Mitigation**

<b>Project Impacts</b>	<b>Mitigation</b>
<b><i>Land Use (Section 3.1)</i></b>	
About 0.3 acres of private commercial land would be converted to transportation use. Other concerns or issues associated with land management include stormwater	Mitigation for land use impacts is compensation for the purchase of property (see Community Resources for further detail). Coordination with local land managers will continue as part of the design process to determine whether additional easements across public lands are necessary and clarify boundaries

Project Impacts	Mitigation
runoff, access management, median treatments, trails, and aesthetics.	associated with existing easements. The conditions that are part of the UDOT highway easement will be complied with. Other concerns or issues associated with land management are addressed in their respective section.
<b>Farmland (Section 3.2)</b>	
Farmland in the project area is already committed to urban development or water storage.	None necessary.
<b>Community Resources (Section 3.3)</b>	
<p>In addition to the commercial land converted to transportation use (see Land Use), the project would require permanent easements totaling about 2.6 acres on private commercial land and construction activities would likely temporarily disturb another 3.8 acres. The Preferred Alternative is not expected to displace residences, farms, or non-profit organizations, but <u>may</u> impact two business buildings (see Economics for further detail).</p>	<p>Property acquisition will be conducted in accordance with Title VI of the Civil Rights Act of 1964 and the Uniform Relocation Assistance and Real Property Acquisition Policies act of 1970 as amended (the Uniform Act). Relocation services and benefits, <u>if necessary</u>, will be administered through UDOT's Relocation Assistance Program.</p>
<p>During construction, tourists and residents would be temporarily inconvenienced by traffic delays. Water lines, sewer, power, and storm water systems would require relocating and/or upgrading within the roadway or parkstrip. The extent of these relocations and improvements would be identified during final design, but service interruptions would be limited.</p>	<p>The existing right of way boundary shown in Figure 2-4 of the EA is based on the best available data. Additional survey work will be accomplished as during the project design process.</p>
<p>The project would either enhance or have a minimal effect on parks, trails, wetland preserve, campgrounds, and other recreation resources adjacent to US-191 (also see Section 4(f)).</p>	<p>Landscaping and median treatments consistent with the North Corridor Gateway Plan will be considered during design (see Visual Quality).</p> <p>UDOT standards for traffic control management will be implemented to coordinate the efficiency and safety of construction activities throughout the duration of the project.</p> <p>Major construction activities would be halted on weekends during peak tourist season (i.e., March, April, and late October) and during major events (i.e., the Skinny Tire festival, the Canyonlands half marathon and five mile run, the Easter Jeep Safari, and the 24 Hours of Moab bike race).</p> <p>The city, residents, and travelers will be kept informed regarding construction activities.</p> <p>Recreation activities on the Colorado River will not be restricted during peak boating season since work within the live channel is restricted during the summer months. Existing trails will remain open for use during peak tourist season. Site specific locations may require temporary closures at other times when construction activities make it unsafe for use by pedestrians and bicyclists. Proposed roadway shoulders and sidewalks, as well as restoration of disturbed trails, and the enhancement of the Courthouse Wash to Colorado River Bridge Trail will improve the safety of bicyclists and pedestrians along US-191 and also increase connectivity of non-motorized trails within the area.</p>
<b>Economics (Section 3.4)</b>	

Project Impacts	Mitigation
<p>Two business buildings located at 512 North Main and 550 North Main are <u>potentially</u> impacted. If these buildings can not be avoided or reconfigured as part of the design process, up to five businesses could potentially be displaced. Loss of these businesses would result in temporary loss of employment (estimated at up to 25 employees), as well as property, sales, and transient room tax revenues. The modification of the awning associated with the business building located at 415 North Main would not result in a displacement of the new business on this property.</p> <p>During construction, patrons may have a more difficult time getting to and from businesses because of restricted lanes of travel, reduced speed limits, and moderate delays. Businesses would be able to remain open with temporary construction access, and the most direct construction-related impacts to businesses are expected to occur during construction activities associated with the roadway section south of the Colorado River.</p>	<p>During the ROW acquisition and design processes, UDOT will communicate clearly with each affected property owner so that they may assist in developing fair, equitable, and workable solutions to the outstanding design and location challenges of this project. At that time, UDOT and the property owner will consider whether the use of design features, variations of the typical section width, and/or reconfiguration of the business structure can be used to avoid displacement of businesses associated with the buildings at 512 North Main and 550 North Main, and how best to minimize impacts to these properties. Coordination with the property owner of 415 North Main regarding the modification of their awning is also required.</p> <p>In order to help keep all business owners apprised of project activities, the Moab Chamber of Commerce will continue to be coordinated with during design and construction.</p> <p>There will be at least one lane in each direction open during construction of the Colorado River Bridge.</p> <p>Pedestrian access to businesses will remain open during construction.</p> <p>Access to businesses will be maintained throughout construction and most driveways will remain open.</p> <p>Where amenable to the property owner, consolidation of driveway accesses will be considered in the design phase.</p> <p>UDOT's business guide, Partners for the Road Ahead, was available to businesses at the public hearing to assist them in proactively planning for and successfully coping with construction (also available online at <a href="http://www.udot.utah.gov/business-guide">www.udot.utah.gov/business-guide</a>).</p> <p>Additional mitigation measures are identified in Community Resources and Visual Quality.</p>
<b><i>Pedestrian and Bicyclist Considerations (Section 3.5)</i></b>	
See Community Resources and Section 4(f).	
<b><i>Air Quality (Section 3.6)</i></b>	
<p>Regional Air Quality Conformity requirements do not apply and there has never been an NAAQS criteria impact recorded in the region for any criteria pollutant. Construction activities can have a short-term impact on local air quality during periods of site preparation, with particulate matter from fugitive dust having the greatest impact. The</p>	<p>Best Management Practice (BMP) measures will be implemented, and the contractor will comply with the provisions of state laws governing the maintenance and operations of construction equipment and regulations governing fugitive dust. The emissions that are due to the construction operations for this project will be mitigated by implementation of the following BMP measures. Specific project level measures suggested during construction operations include:</p>

Project Impacts	Mitigation
<p>effect of fugitive dust would be temporary and would vary in scale depending on local weather conditions, the degree of construction activity, and the nature of the construction activity.</p>	<ul style="list-style-type: none"> <li>• Fugitive Dust Emission Control Plan: During construction of the project, the contractor would maintain a fugitive dust control plan under the State or Utah Fugitive Emissions Program Rule R307-205-5, effective December 1, 2006. Strategies to control fugitive dust under R307-205-5 may include wetting or watering, chemical stabilization, planting vegetative cover, providing synthetic cover, wind breaks, or other equivalent methods or techniques approved by the DAQ.</li> <li>• Other Emissions Controls: The contractor would shut off construction equipment when not in direct use to reduce idling, adhere to burning restrictions, control local source plant operations (e.g., asphalt, cement, and crushing), and minimize hauling.</li> </ul>

### **Noise (Section 3.7)**

Up to 11 receptors have sound levels that approach, equal, or exceed the UDOT criteria in the design year. These include three motels, two single family residences, and six commercial business receptor sites. Temporary increases in the sound level environment because of construction activities are expected to occur at the studied receptor sites.

In accordance with UDOT's Traffic Noise Abatement Policy (UDOT 08A2-1; revised March 8, 2004), there are no practical (reasonable and/or feasible) noise abatement measures which will eliminate the traffic noise impact and noise walls are not proposed.

The project falls within a "noise sensitive zone" as defined by UDOT construction standard specification Section 01355 (Environmental Protection) Part 1.8 Noise and Vibration Control. This specification states that the contractor will be required to prohibit construction activity in a noise sensitive zone if the sound level within 10 feet of the nearest receptor exceeds 95 dBA in daytime (from 7 am to 9 pm) or 55 dBA in nighttime (from 9 pm to 7 am), as well as Sundays and state holidays.

For non-planned or non-permitted undeveloped land, it is suggested that commercial development be incorporated in a manner that would create a buffer zone between US-191 and sensitive areas. In an effort to help create a buffer zone for future planning purposes of undeveloped land, the worst-case 65 and 70 dBA contours were developed for the two sections of US-191 that are proposed to have different speeds.

### **Geology and Soils (Section 3.8)**

The rock outcrops east of US-191 are carved layers of sedimentary rock formations that have been molded and eroded by a variety of uplifting and erosional processes and there is limited soil substrate. The west side of US-191 includes a range of soil types, two of which are hydric soils.

The use of retaining walls and incorporating erosion control measures into the project will limit encroachment into rock outcrops and other potential geologic hazards.

### **Water Resources (Section 3.9)**

Project Impacts	Mitigation
<p>Highway and bridge construction may result in short-term impacts on the Colorado River, the Scott Matheson Wetland Preserve, and Courthouse Wash in the form of temporary increases of sediment levels and pollutants associated with highway runoff and construction activities. Heavy equipment in or near the waterways may disturb bank and riverbed materials, temporarily increasing the suspended sediment load. Vehicle traffic, equipment and material staging, and construction waste stockpiles could impact vegetation, lead to increase erosion and decreased bank stability. Material and waste stored on site could load hydrocarbons into waterways directly or through overland flow or storm drains. Concrete work along the banks could induce a temporary and local caustic environment in the waterway. Disturbance of contaminated soils could result in a pollutant load to surface waters.</p> <p>Potential long-term impacts mainly consist of additional runoff associated with increased impervious surfaces and larger bridge surface. The impervious surface area of the highway is estimated to increase from approximately 21 acres to just over 33 acres. Based on conceptual design, four detention ponds are expected to capture approximately 46 percent of the additional runoff and outflow is expected to be released at the historic rate. The remaining increases would be conveyed to existing or future city/county systems or through ditches and pipes to nearby surface waters.</p> <p>Within the Colorado River and Lower Courthouse Wash, construction of abutments on the bank may result in a permanent loss of vegetation. Stream velocities have the potential to increase from constrictions at the abutments and piers. These higher velocities could produce scour,</p>	<p>Mitigation for impacts to water resources is addressed through several required permits, reviews, and approvals (see list outlined in <b>Table 3.9-8</b> of the EA). Mitigation requirements and other conditions associated with these permits and approvals will be complied with.</p> <p>As part of the Section 402 permitting process, a Storm Water Pollution Prevention Plan (SWPPP) will be developed and incorporated in the design plans and construction contract documents. Plan elements for permanent storm water runoff control and treatment that are included in the SWPPP will be submitted to and reviewed by the Division of Water Quality (DWQ). The DWQ will also be notified if water turbidity in adjacent surface water is increased by 10 NTU's or more as a result of the construction activities.</p> <p>Conditions outlined in the UDOT Highway easement also require that the National Park Service (NPS) have the opportunity to review plans and that measures be incorporated to prevent erosion, sediment, and exotic weed invasions. The use of pesticides or herbicides without the consent of the NPS is prohibited.</p> <p>During construction, the effectiveness of BMPs will be monitored. Specific BMPs for the proposed project are expected to include the following:</p> <ul style="list-style-type: none"> <li>• Staging Areas – Where possible, materials and equipment will be staged away from river banks and located in areas that minimize impacts to existing vegetation. When necessary, precautions will be taken (i.e. BMPs).</li> <li>• Preservation of Existing Vegetation – Existing vegetation will be protected by preventing disturbance beyond the specified limits of construction.</li> <li>• Clearing Limits – The amount of bare soil exposed at one time shall be limited and the duration of bare soil exposure shall be minimized in accordance with the SWPPP.</li> <li>• Stabilization of Construction Entrance and Roads – Stabilized construction entrances will be used to prevent the tracking of mud and other construction debris on city and county roads.</li> <li>• Access – Stream access points will be limited to those necessary for construction.</li> <li>• Dust Control – Watering and/or compacting materials will be used as appropriate to minimize dust.</li> <li>• Spill Prevention Control and Countermeasure (SPCC) – A SPCC plan will be prepared during final design. Fuel and other hazardous materials shall be stored and handled as far as possible from the waterway. Special consideration will be given to barges and cranes working in the river.</li> <li>• Waste Management – Waste materials will be stockpiled</li> </ul>

Project Impacts	Mitigation
<p>resulting in an increased suspended sediment load. The potential for impacts is varied and depends on final bridge and roadway design, and construction methods, as well as the use of applicable BMPs.</p> <p>Potential for impacts to groundwater resources are expected to be limited. Potential impacts on surface water rights consist largely of short-term impacts, such as water depletion and temporary sediment and pollutant loading, related to construction of the bridge. BMPs described in Section 3.9.8 of the EA will be implemented so that temporary increases in sediment loads do not exceed the capacity of downstream withdrawal systems. Diversions or coffer dams would prevent water depletion impacts for downstream points of diversion.</p>	<p>away from the river bank, covered, and removed from construction areas promptly. Excess fill material shall not be placed in the waterway, wetlands, or floodplains. Contaminated soils will be handled and disposed of properly.</p> <ul style="list-style-type: none"> <li>• Erosion Control Devices – Where applicable, erosion control devices (such as silt fence and fiber rolls) will be installed around exposed ground in active construction areas to reduce erosion from the site. The erosion control devices, in combination with other BMPs, will help prevent untreated runoff from exiting construction sites.</li> <li>• In-line Water Quality Features – In-line water quality features (e.g., oil/sediment separators) will be installed, where appropriate, to reduce the level of contaminants prior to discharge.</li> <li>• Dry Extended Detention Pond – Detention ponds will be used when necessary to detain runoff and allow for settling of sediment or other contaminants. A routine maintenance schedule will minimize the build-up of sediment and other material, which could otherwise become an additional source of contaminants entering the groundwater.</li> <li>• Cofferd Dams – Depending on construction method, coffer dams may be used to divert flow around instream construction activities.</li> <li>• Slope Stability – Disturbed slopes will be stabilized and revegetated in accordance with UDOT's Standard Specifications for Topsoil and Seeding. Decorative rock, boulder scatter, and shrub plantings may also be used in some locations.</li> <li>• Break Periods – Construction may be temporarily suspended in an area, if necessary, to reduce temporary loading.</li> </ul>

#### ***Floodplains (Section 3.10)***

The US-191 Colorado River Bridge is within the 100-year floodplain. The new US-191 Colorado River Bridge would be at the same location as the existing structure and abutments, and the design would include three to six piers in the Colorado River floodplain. The new configuration, although still within the floodplain, would be less restrictive to flows and debris because there would be fewer obstacles in the flow path than if piers were placed perpendicular to the roadway. Stormwater runoff would have a negligible effect on the

Since Moab City participates in the Floodplain Insurance Rate Map (FIRM) and work will be required within the designated 100-year floodplain of the Colorado River, coordination with the local floodplain coordinator (i.e., Moab City, Grand County, and/or the Utah Floodplain Coordinator) during design is required. The local floodplain coordinator will review the hydraulic/hydrology calculations and verify that there is no increase in the water surface elevation and that no further coordination is required.



Project Impacts	Mitigation
Colorado River floodplain.	
<b>Wild and Scenic Rivers (Section 3.11)</b>	
There are no designated Wild and Scenic Rivers located within the project limits. However, Wild and Scenic River eligibility and suitability of this segment under the recreational classification is being advocated. The project would not alter the potential values that would qualify the Colorado River for designation under this classification.	N / A
<b>Wetlands (Section 3.12)</b>	
The project would result in a total of 0.07 acres of permanent and 0.17 acres of temporary impacts to wetland areas.	An alignment shift was incorporated to avoid impacts to Wetland 2. A Section 404 Permit will be obtained prior to discharging dredged or fill materials into waters of the United States, including wetlands. Mitigation requirements and other conditions outlined in the Section 404 Permit will be complied with. Conceptually, wetland mitigation is expected to consist of clearing litter from wetland areas and enhancing wetlands temporarily impacted by equipment or other construction activities. Replanting this disturbed area along the Colorado River corridor that currently consists of monotypic stands of tamarisk with a native cottonwood and willow complex will increase habitat value and may encourage residency for migratory birds. Native willow and cottonwood cuttings will be used rather than containerized stock.
<b>Vegetation and Wildlife (Section 3.13)</b>	
Because of the lack of biodiversity of the vegetation communities within the construction limits, the current degraded habitat functions and values of these communities for wildlife, and the low density of residential wildlife within the project area, the impacts to vegetation and wildlife are expected to be minimal. Direct impacts on vegetation could result from the removal of vegetation, soil compaction, and increased soil erosion. Changes in roadside vegetation and urban landscaping would not alter the presence or absence of existing wildlife species. The construction of this project would	Mitigation for impacts to vegetation and wildlife will be addressed through the mitigation measures outlined in Water Resources, Wetlands, and Threatened, Endangered, and Other Sensitive Species. Additionally, potential for conflict between vehicles and Desert big horn sheep will be minimized by erecting signs as part of the project to cautions drivers that sheep frequent the area.

Project Impacts	Mitigation
<p>require the removal of monotypic stands of tamarisk along the Colorado River corridor that are impacted by equipment or other construction activities.</p> <p>Construction activities could result in some wildlife mortality, primarily to species with limited mobility and/or those that could be occupying burrows or nests at the time of construction. Aquatic species may be indirectly affected by the temporary turbidity increases, increased sedimentation, or decreased water quality due to construction associated with the Colorado River Bridge. These disruptions may indirectly affect the species immunity abilities from the stress associated with these impacts and may create indirect mortality.</p> <p>Scoping comments also identified that Desert Big Horn sheep frequent the area and could pose a safety risk to travelers.</p>	
<p><b><i>Threatened, Endangered, and Other Sensitive Species (Section 3.14)</i></b></p>	
<p>The proposed action may affect, but would not likely adversely affect the humpback chub, bald eagle, Mexican spotted owl, Southwestern willow flycatcher, and the candidate Western yellow-billed cuckoo. The project is not likely to jeopardize the continued existence of the Colorado pikeminnow, bonytail chub, or the razorback sucker and is not likely to result in destruction or adverse modification of critical habitat. Impacts to sensitive species may occur from construction activities. Bat species may be impacted if they are present under the existing US-191 Colorado River Bridge during construction. The western toad and the corn snake could possibly be associated with habitat along the Colorado River or Lower Courthouse Wash. The state sensitive fish and bird species have the ability to flee</p>	<p>Mitigation will comply with the conditions of the U. S. Fish and Wildlife Service (USFWS) Biological Opinion dated October 10, 2006. BMPs and other mitigation measures used for federally listed species will limit potential impacts to other sensitive species as well. The following actions and protective measures will be taken by construction contractors and crews, in compliance with the Biological Opinion, to minimize impacts:</p> <ul style="list-style-type: none"> <li>• Install silt fencing to prevent material from entering the river or side drainages.</li> <li>• Install erosion control barriers and bank stabilization techniques to reduce possible erosion of riverbanks during construction.</li> <li>• Minimize large equipment access in the river and adjacent floodplains.</li> <li>• Replace monotypic stands of tamarisk along the Colorado River bridge corridor that are impacted by equipment or other construction activities with a native cottonwood and willow complex, which are historical substrates for nesting and foraging for the southwestern willow flycatcher and the yellow-billed cuckoo.</li> </ul>

Project Impacts	Mitigation
<p>from direct impacts from construction and can move to adjacent habitat. If sensitive fish are present during construction of the US-191 Colorado River Bridge, these species may be indirectly affected by the temporary turbidity increases, increased sedimentation, or decreased water quality. These disruptions may indirectly affect the species immunity abilities from the stress associated with these impacts and may create indirect mortality.</p>	<ul style="list-style-type: none"> <li>• Native willow and cottonwood cuttings will be used for revegetation rather than containerized stock.</li> <li>• Implement soil stabilization and erosion control devices to ensure river banks and drainages are stable.</li> <li>• Use native grasses and forbs to re-seed disturbed soils.</li> <li>• The potential for accidental spills of hazardous materials will be identified, minimized, and avoided through implementation of BMPs and measure specified in the SWPPP. A SPCC will be developed and followed during construction. This plan will identify riparian zones and drainages and outline conservation measures to ensure protection. UDOT will implement a plan to identify and protect sensitive resources through applicable BMPs. The SPCC and SWPPP will address: <ul style="list-style-type: none"> <li>○ Refueling of construction equipment near riparian zones and drainages will be done in accordance with applicable state and county codes.</li> <li>○ Riparian zones and drainages will be defined by staking and flagging in appropriate areas.</li> <li>○ Equipment near aquatic habitat, as defined, will contain a hazardous materials response kit to prevent impacts to aquatic habitat.</li> </ul> </li> <li>• Obtain fill materials from a validated clean source. In areas of contact with water, use clean fill materials where possible rather than concrete or other artificial materials.</li> <li>• Confine construction activities and equipment to the designated construction work areas. These areas will be surveyed by a qualified biologist for sensitive resources and defined by lathes and flagging. Construction activities will be contained in these areas. New areas will need approval.</li> <li>• Areas of important resources will be restricted and no access will be identified and marked "restricted."</li> <li>• The installation of cofferdams will be completed outside the spawning season of the Colorado River endangered fishes (May – August). During operation of cofferdam pumps, May – August, a qualified biologist will monitor pumps for impacts to these species.</li> <li>• Construction activities within the Colorado River during the May – August spawning period for the endangered Colorado River fish will be limited to work within the cofferdams.</li> <li>• Prohibit construction activities within the water channel of Lower Courthouse Wash. Place riprap, if necessary, from the bank and anchor riprap outside of water channel.</li> <li>• If construction activities extend into the Southwestern</li> </ul>

Project Impacts	Mitigation
	<p>willow flycatcher breeding season (May- August), and these activities will be conducted within 1,000 feet of suitable habitat, a qualified biologist will conduct preconstruction surveys in accordance with approved survey protocols. If present, a 1,000 foot "No disturbance" buffer zone will be established around this site and no construction activities will be allowed within the buffer zone during the breeding season.</p> <ul style="list-style-type: none"> <li>• Construction workers will attend environmental awareness training on the protective measures to ensure compliance.</li> <li>• Photographs and documentation of existing environment will be taken to assist in restoring habitat alterations and degradation from construction activities to preconstruction baseline levels.</li> <li>• Locate pumps for water depletion at cofferdam locations (if applicable) in the water column where chance of larval fish entrainment is minimized. Monitoring will be needed to ensure location and screening is correct.</li> <li>• A UDOT Certified Environmental Control Supervisor (ECS) will monitor all environmental sensitive areas in addition to BMPs and erosion control devices.</li> <li>• Perform monitoring by a qualified biologist during construction in areas of potential impact to the species or breeding habitat to monitor and record any incidental take.</li> <li>• Construction activities that involve any disturbance to river waters or associated drainages will not take place during spawning, post-spawning, incubation, and fry stages of the Colorado pikeminnow, bonytail chub, and razorback sucker (May – August).</li> <li>• Construction activities will span no more than two consecutive endangered fish spawning seasons.</li> <li>• Construction activities that involve any disturbance to the river waters or associated drainages will avoid creation of isolated pools or stranding fish within microhabitats.</li> <li>• Where isolated pools are formed, the Division of Wildlife Resources or qualified personnel approved by the USFWS will be contacted to remove and seine any entrapped endangered fish.</li> <li>• Provisions to maintain Division of Wildlife Resources or qualified biologists on-site when project activities may impact endangered species must be made prior to commencement of construction activities.</li> <li>• FHWA/UDOT, the applicant, and contractor will ensure that construction equipment is not leaking hazardous substances. Any spills or leaks will be immediately cleaned up.</li> <li>• Upon completion of the project, FHWA/UDOT will provide</li> </ul>

Project Impacts	Mitigation
	the USFWS with a report documenting how the reasonable and prudent measures and the terms and conditions were implemented and numbers of any fish taken.
<b><i>Invasive Species (Section 3.15)</i></b>	
Invasive species or noxious weeds could be introduced or spread via vehicles and soil disturbance activities.	<p>UDOT's Special Provision Section 0294S: Invasive Weed Control identifies BMPs that will be used to prevent invasions of noxious weeds on disturbed sites along the right of way.</p> <p>UDOT will specify on construction contract documents that seed mixes used for landscaping and/or erosion control must be free of noxious weeds and other invasive plant species.</p> <p>In compliance with the Executive Order 13112, the Utah Noxious Weed Act, and subsequent guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.</p>
<b><i>Paleontological, Archaeological, and Historic Resources (Section 3.16)</i></b>	
Site 42GR3627, a prehistoric lithic scatter, is adversely affected by the project. The only architectural property adversely affected is the Colorado River Bridge. The project will fill over isolated and non-contributing segments of historic US-160 roadway and destroyed abutment of the previous Courthouse Wash Bridge (Sites 42GR2565.15 and 42GR2565.16) but will have no effect on the historic qualities of the overall site.	<p>The Preferred Alternative incorporates several measures that resulted in avoiding eligible sites, including minor adjustments to the vertical and horizontal roadway profile, steepening cut or fill slopes, and/or the use of retaining walls (as outlined in Table 3.16-3 of the EA).</p> <p>Mitigation for adverse effects will be conducted in accordance with the Memorandum of Agreement (MOA) that stipulates data recovery of site 42GR3627 and Intensive Level Survey (ILS) documentation of the Colorado River Bridge. The MOA and related documentation will be filed with the Advisory Council on Historic Preservation (ACHP) at the conclusion of the consultation process.</p>
Also see Section 4(f).	<p>To ensure the contractor does not encroach into any site areas not specified for construction use, UDOT will include a special provision in the construction contract that explicitly identifies areas needing protection by roadway stationing and erecting temporary fencing as a barrier to unaffected site portions. Standard Specifications governing the contract require that damage incurred by the contractor be mitigated at contractor expense. UDOT Standard CSI 01355 Environmental Protection Part 1.10 - Discovery of Historic, Archaeological, and Paleontological Resources applies to this project and stipulates instructions to the contractor for the protection of any archaeological, historical, or paleontological resource discovered in the course of construction. Should a discovery</p>

Project Impacts	Mitigation
	occur, UDOT will consult with the SHPO and relevant consulting parties toward developing and implementing an appropriate treatment plan prior to resuming construction.
<b>Hazardous Materials or Waste (Section 3.17)</b>	
The project would construct on land associated with the following sites of potential concern:	Specific mitigation plans will be developed and implemented to contain hazardous materials encountered during construction and to eliminate contamination after construction. If warranted, further mitigation will be developed following additional investigation of those sites. The UDOT Specification 08A2-3 includes provisions in the event that additional hazardous waste sites are discovered during construction. Should workers encounter contamination during construction in these or any other locations, they should clear the area and contact the Division of Environmental Response and Remediation (DERR) immediately. Other mitigation measures include the following:
High Concern: <ul style="list-style-type: none"> <li>• Moab Uranium Mill Tailings Remedial Action (UMTRA) site,</li> </ul>	<ul style="list-style-type: none"> <li>• The contractor will be required to provide written notification to the Division of Air Quality (DAQ) at least ten working days before the demolition of any structure, including buildings with no asbestos. DAQ indicates that Regulated Asbestos-Containing Materials (RACM) must be identified by a certified asbestos inspector and removed by a certified asbestos abatement contractor prior to demolition. If the amount of asbestos to be removed is greater than the National Emission Standard for Hazardous Air Pollutants (NESHAP) size, then notification and payment of the appropriate fee is due ten working days prior to the asbestos removal project. Written notification is due at least one working day before the less-than-NESHAP-size amount of RACM is disturbed on any renovation project. During demolition activities, the contractor will ensure that workers follow Occupational Safety and Health Administration (OSHA) regulations regarding potential exposure to airborne lead and asbestos. In addition, representative samples of any construction waste derived from commercial structures should be tested by the Toxic Characteristic Leaching Procedure (TCLP) to determine if the waste is hazardous.</li> <li>• The contractor will properly remove and dispose of asbestos and lead contaminated materials according to all federal, state, and local regulations. The contractor will also be advised of the potential of encountering petroleum hydrocarbon contamination.</li> <li>• The contractor will monitor and properly handle and dispose of petroleum or other contaminant-impacted soils during construction. At a minimum, the following sites require monitoring (map identification numbers apply to Figure 3-12 in the EA): <ul style="list-style-type: none"> <li>◦ 1 – Moab UMTRA site, between the Colorado River</li> </ul> </li> </ul>
Moderate Concern: <ul style="list-style-type: none"> <li>• Moab Service Center,</li> <li>• Vacant lot at 634 North Main Street,</li> <li>• Maverick #238,</li> <li>• Tag-A-Long Expeditions,</li> <li>• Maverick #337,</li> <li>• Black Oil Distributing,</li> </ul>	
Low Concern: <ul style="list-style-type: none"> <li>• Holiday Inn Express,</li> <li>• Ferrell North America Moab,</li> <li>• Anasazi Realty,</li> <li>• Century 21 Red Rocks Real Estate, and</li> <li>• Moab Realty.</li> </ul>	
Construction may also uncover contaminants that have migrated into the right of way from source areas outside the right of way from nearby hazardous waste generators. Construction and demolition activities could affect properties with ACMs.	

Project Impacts	Mitigation
	<p>Bridge and SR-279,</p> <ul style="list-style-type: none"> <li>○ 5 - Moab Service Center, 500 West and Main Street,</li> <li>○ 6 - Vacant Lot, 634 North Main Street,</li> <li>○ 7 - Maverick #238, 435 North Main Street,</li> <li>○ 8 - Tag-A-Long Expeditions, 452 North Main Street,</li> <li>○ 9 - Maverick #337, 397 North Main Street, and</li> <li>○ 35 - Black Oil Distributing, 995 North Main Street.</li> </ul> <ul style="list-style-type: none"> <li>• Should full property acquisition or the disposal of surplus property from the following sites be necessary, the UDOT Environmental Division will be consulted to determine the extent of further investigation applicable to each site. When permission to conduct this investigation can be obtained from the existing property owner, UDOT should conduct this investigation prior to acquisition of the property: <ul style="list-style-type: none"> <li>○ 1 - Moab UMTRA site, between the Colorado River Bridge and SR-279,</li> <li>○ 5 - Moab Service Center, 500 West and Main Street,</li> <li>○ 6 - Vacant Lot, 634 North Main Street,</li> <li>○ 7 - Maverick #238, 435 North Main Street,</li> <li>○ 8 - Tag-A-Long Expeditions, 452 North Main Street,</li> <li>○ 9 - Maverick #337, 397 North Main Street</li> <li>○ 35 - Black Oil Distributing, 955 North Main Street,</li> <li>○ 37 - Holiday Inn Express, 1500 North Highway 191,</li> <li>○ 38 - Ferrell North America Moab, 1431 North Highway 191,</li> <li>○ 39 - Anasazi Realty, 755 North Main Street,</li> <li>○ 40 - Century 21, 505 North Main Street, and</li> <li>○ 41 - Moab Realty, 550 North Main Street</li> </ul> </li> </ul>

### ***Visual Quality (Section 3.18)***

Visual impacts are not expected to change the overall character of the setting. Alterations to visual views include the widened roadway and structure cross sections, the addition of retaining walls, cut/fill slopes, and stormwater features. Additionally, construction equipment and stockpiled materials used for roadway construction could temporarily affect both foreground and background views either from visually sensitive

UDOT's Context Sensitive Solution (CSS) principles have been examined and measures that have been incorporated into the Preferred Alternative to reduce visual impact include:

- Match the existing alignment and vertical grade as much as possible,
- Incorporate retaining walls to minimize cut sections,
- Use the bikepath on the east side south of the Colorado River Bridge for non-motorized uses (instead of having both a sidewalk and bikepath along the east side), and
- Provide consistency with roadway design elements at both

Project Impacts	Mitigation
sites or from US-191. Temporary construction activities would be visually unappealing for roadway users, residents, and tourists.	project termini.  Aesthetic treatments and visual enhancements of design features will be finalized during design through an aesthetic committee consisting of participants from Moab City, Grand County, and/or the Trail Mix Committee for Non-Motorized Trails. The design will consider the cost and practicality associated with architectural treatments (e.g., form liners, concrete staining, decorative lighting, decorative rock, boulder scatter, shrub plantings, and/or other native landscaping) of design features such as retaining walls, structures, lighting, cut/fill slopes, and medians. Betterments may require local funding partners.

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### ***Cumulative Effects (Section 3.19)***

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Three resources of concern relating to the potential for cumulative effects were identified through scoping, including the sustainability of Moab's tourism-based economy, bicycle and pedestrian facilities, and drainage.

The overall effects of the project, in conjunction with other ongoing actions are expected to support Moab's tourism-based economy.

Bicycle and pedestrian facilities are expected to be enhanced over time with or without the project and are expected to provide continuous trail network. Enhancements associated with the Courthouse Wash and the Colorado River Bridge Trail may occur sooner with the project, and continuous widened shoulders would only occur with the project.

Cumulative impacts to drainage are anticipated to be managed by implementing storm water management practices, and over time, drainage within the study area should improve. Storm water management systems along US-191 could be implemented sooner with the project, except that funding is not yet in place for this section of roadway.

On-going coordination with Grand County and Moab City, as well as other public land managers and regulatory agencies, will occur during design and construction to help ensure that the project design and construction schedule is coordinated with the implementation of future actions.

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### ***Section 4(f) (Chapter 4)***

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The project would result in a De Minimis impact to four recreation sites and one wetland preserve. These

The following outlines mitigation associated with Section 4(f) resources that are not already addressed in mitigation outlined under Community Resources and Paleontological,



Project Impacts	Mitigation
<p>resources and their respective jurisdictional authorities include:</p> <ul style="list-style-type: none"> <li>• Arches National Park – NPS</li> <li>• Lions Park – Grand County</li> <li>• Colorado River Bridge Underpass Trail – Grand County</li> <li>• Courthouse Wash to Colorado River Bridge Trail – Grand County</li> <li>• Scott Matheson Wetland Preserve – Division of Wildlife Resources</li> </ul> <p>The project would also replace the US-191 Colorado River Bridge, which is eligible for inclusion on the NRHP. This bridge is also known as Bridge Over Colorado River (Structure C-285).</p>	<p>Archaeological, and Historic Resources.</p> <p>North of the US-191 Colorado River Bridge, construction will avoid nearby rock slopes and protect other resources important to Arches National Park. The design of the widened Courthouse Wash Bridge will continue to accommodate an informal foot trail to the nearby rock art panel.</p> <p>The limited parking that is disturbed at Lions Park by construction activities will be restored once construction is complete. The proposed fill slope associated with Lions Park was not steepened and a retaining wall was not recommended to avoid encroachment into the park because the ability to landscape slopes is a desirable goal of the park. The project design features will be coordinated with Grand County.</p> <p>The Colorado River Bridge Underpass Trail will be fully reconstructed with similar design features as currently exists.</p> <p>Just south of the US-191 Colorado River Bridge, the project design incorporates the use of a 2:1 slope and retaining wall to avoid fill within the preserve. Runoff will be treated using an in-line oil/sediment separator prior to discharge into a depressed area within the preserve at this location. Runoff will also be discharged to the preserve just south of the Moab Valley RV Resort; however, physical construction at this location will be avoided. Opportunities for additional water to be discharged to desirable locations within the preserve may be possible during design. Changes will be in accordance with the ecological and programmatic goals outlined in the Site Conservation Plan (Division of Wildlife Resources, 1994) and coordinated with the Division of Wildlife Resources and TNC.</p> <p>Once construction is complete, disturbed areas will be revegetated.</p>

## COORDINATION:

Consultation with agencies and other interested parties has been conducted throughout the NEPA process using meetings, letters, phone calls, and/or email discussions. The following table summarizes the primary meetings that have been held.

### Agency and Public Participation Meetings

Date	Meeting Type
March 3, 2004	Public Scoping Meeting and Project Workshop
March 3, 2004	Agency Scoping Meeting
March 14, 2006	Focus Workshops
April 11, 2006	Other Interagency Meetings
June 21, 2006	
December 8, 2005	Other Coordination with Local Entities (Moab City and Grand County)
March 23, 2006	
April 28, 2006	
December 12, 2006	
December 12, 2006	Public Hearing

Agencies and other interested parties contacted about this project include (but are not limited to) the general public; property owners; businesses; local communities; and representatives from the Bureau of Land Management (BLM), Federal Emergency Management Agency (FEMA), U.S. Army Corp of Engineers (USACE), U.S. Coast Guard (USCG), U.S. Department of Agriculture (USDA), U.S. Department of Energy (USDOE), Environmental Protection Agency (EPA), USFWS, National Park Service (NPS), ACHP, Native American Tribes, Governor's Office of Planning and Budget, Resource Development Coordinating Committee (RDCC), Utah Department of Natural Resources (UDNR), Utah Department of Environmental Quality, Utah Division of State History, Grand County, Moab City, The Nature Conservancy, Moab Trails Alliance, and the Moab Trail Mix Committee for Non-Motorized Trails.

Primary written consultation between federal, state, and local agencies, and other interested parties is included in the EA (Appendix D and E). The USACE, USFWS, USDOE, EPA, NPS, BLM, and UDNR were given an opportunity to review the Administrative Draft EA and responses to comments received from these agencies were reflected within the Draft EA. The DWQ, DAQ (through RDCC), Moab City, and other interested parties commented on the Draft EA. Comments received at the public hearing (held December 12, 2006) and during the comment period have been addressed within the EA. Detailed responses to each comment are included Appendix E of the EA.

## FINDING OF NO SIGNIFICANT IMPACT REQUIREMENTS:

23 Code of Federal Regulations 771.111(f) requires evaluation of the following in a FONSI:

- The project must connect logical termini and be of sufficient length to address environmental matters on a broad scope.

- The project must have independent utility or independent significance.
- The project must not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

### **Logical Termini**

The project begins at the intersection of US-191 and 400 North in Moab and ends at the intersection of US-191 and SR-279 (also known as Potash Road) north of the city. The intersections at 400 North and SR-279 are both existing four-lane sections that provide logical connection points for this project. As proposed, the improved 3.7-mile long roadway will provide continuity with the existing four-lane sections at either end of the project limits.

### **Independent Utility**

The project does not depend on the construction of other roadway or facilities. The project would provide independent utility and independent significance by constructing a new bridge and improved roadway that would allow US-191 to continue to serve the Moab area.

### **Other Transportation Projects**

As proposed, the project would not affect Moab City or Grand County from implementing other transportation projects.

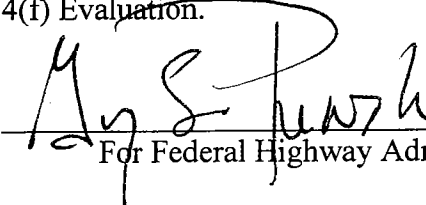
### **CONCLUDING STATEMENT:**

The project is needed to provide a bridge that accommodates US-191 traffic over the Colorado River and also meets current structural design standards, improves safety throughout the project corridor, meets the existing and projected travel demand through the design year 2030, provides continuity with the existing four-lane sections at either end of the project limits, and facilitates the movement of bicycle and pedestrian traffic along US-191.

FHWA has determined that there has been proper consideration of avoidance alternatives to environmentally sensitive areas. Proper mitigation where avoidance is not practical has been provided for impacts resulting from the Preferred Alternative.

### **DETERMINATION:**

The FHWA has determined that the Preferred Alternative, as presented in the EA as the Build Alternative and described above, will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached EA and Programmatic Section 4(f) Evaluation, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached EA and Programmatic Section 4(f) Evaluation.

  
For Federal Highway Administration

Date 5/25/07